

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

Pamp
aQC929
.A8A8



Avalanche Notes

U.S. Forest Service
Westwide Avalanche Network

INT FOREST & RANGE
EXPERIMENT STATION

FEB 4 1985

STATION LIBRARY COPY

December 1984

The prevailing storm track in December was from the Cascades of Washington and Oregon, through northern Utah to northern Wyoming, and into Colorado. Both north and south of this belt, snowfalls were well below normal. For example, Alyeska, AK recorded only 60% of normal snows, and in the Sierras of California, Mammoth Mtn. totaled 65% of normal, Alpine Meadows, 57%, and Squaw Valley, 44%. Only one day produced double-digit snows in the Sierras: 14-24 inches fell on the 16th.

The Cascades were the only mountain range to have consistently above-normal snows. Mt. Hood Meadows, OR recorded 140% of normal, Crystal Mtn., WA, 120%, and Mt. Rainier, WA, 110%. The heaviest snows fell over the Cascades on the 27th-30th when 44-59 inches accumulated.

In the intermountain area, Bridger Bowl, MT was helped by 36 inches of snow on the 1st-2nd and received 97% of normal for the month. Although Jackson Hole, WY had no days with snowfall greater than 9 inches, it still managed 126% of normal snows. Snowbird, UT came in with 117% of normal and recorded 56 inches on the 16th-22nd.

In Colorado, snowfall varied considerably. In the north, Berthoud Pass received 76% of normal; Copper Mtn, Vail, and Breckenridge all reported 90% of normal. The Aspen areas all received above-normal snow: Aspen Mtn. recorded 170% of normal. Crested Butte got 110% of normal, while further south, Wolf Creek was above normal. On the 28th, Wolf Creek recorded 26 inches of snow which contained 4.90 inches water equivalent.

The same warm storm struck Taos, NM on the 28th and dropped 12 inches of snow having 2.00 inches water equivalent. For the month, Taos reported 80% of normal snowfall.

Avalanche totals were generally below normal for December, but there were some interesting exceptions. Taos, NM had one of its busiest months ever with 173 recorded avalanches. Despite below-average snowfall, the snow came in two storm periods which put its load on a TG-weakened snowpack. In the San Juan Mtns. of Colorado, there were many long-running avalanches, and it was a busy month on Red Mtn. Pass where 51 slides hit the highway. Snowmass, CO endured a cycle of deep-slab releases on the 11th and again on the 17th. Jackson Hole, WY also survived a cycle of 4-to 8-foot slabs on the 24th.

Two fatal accidents occurred in December, both near Aspen, CO. On the 13th, a lone lift skier went out-of-bounds at Aspen Mtn, triggered a soft-slab avalanche, and was completely buried except for one hand. When he was reported missing the next day, searchers followed his tracks to the slide. He was uncovered dead from a shallow burial. On the 31st, two ski tourers triggered a slid at Taylor Pass south of Aspen. One grabbed a tree, and was only partly buried, and dug herself out. She searched the debris but found no sign of her partner. Hours later, a rescue party found the victim totally buried against a tree, but with a ski tip sticking out. He was not deeply buried but was dead when uncovered.

Rocky Mountain Forest and Range Experiment Station

The avalanche toll through December is tabulated below. Three buildings in southern Colorado suffered minor damage in December. All were mine buildings that were grazed by large avalanches. Also this table contains up-to-date statistics on Alaskan accidents, provided by Doug Fesler. Thus far, eight separate incidents in Alaska have caught 13 climbers, tourers, and snurfers; partly buried 2; and injured 3.

Total Avalanches Reported			Damage Summary - This winter								
Area	This Month	This Winter	People				Vehicles		Avalanche Damaged		
			C	B	I	K	B	D	Bldgs	Lifts	Misc.
Central and So. Rockies	690	868	11	6	0	3	0	0	3	0	0
Intermountain	280	463	4	1	1	0	0	0	0	0	0
West Coast	479	894	21	3	4	0	0	0	0	0	0
All Areas	1449	2225	36	10	5	3	0	0	3	0	0

U.S. FOREST SERVICE
ALPINE SNOW AND AVALANCHE RESEARCH PROJECT
RM STATION FORT COLLINS, COLO.

DECEMBER 1984

SUMMARY OF WEATHER AND SNOW CONDITIONS

AREA	SNOWFALL				WATER EQUIVALENT				SNOW DEPTH				TEMPERATURE				WIND SPEED AND DIRECTION			
	TOTAL SNOW- FALL IN.	MAX IN.	AVG IN.	DEN IN.	TOTAL WATER IN.	MAX IN.	AVG IN.	NUMBER OF DAYS GE	MAX IN.	MIN IN.	AVG IN.	MEAN DEGREES F	MAX DEGREES F	MIN DEGREES F	AVG DEGREES F	AVG FOR MO.	5 HOUR PERIODS GE	FASTEST HOUR MPH	DIR.	
CENTRAL AND SOUTHERN ROCKY MOUNTAINS																				
ARAPAHO BASIN, COLO	41.5	13	12	12	4.93	1.20	1.20	12	13	10	10	5.8	23.8	6.2	15.0	8.0	19	23	10	
ASPEN HIGHLANDS, COLO	63.5	11	11	11	5.02	1.20	1.20	12	13	10	10	13.5	26.6	13.5	20.5	8.0	19	23	10	
BEAR LAKE, RMNP, CO	29.9	10	10	10	2.91	1.20	1.20	12	13	10	10	15.7	26.6	15.7	21.9	8.0	19	23	10	
BEAVER CREEK, COLO	35.5	10	10	10	3.51	1.25	1.25	12	13	10	10	4.7	24.9	4.7	14.8	15.4	5	34	4	
BERTHOUD PASS, COLO	38.5	11	11	11	2.67	1.25	1.25	12	13	10	10	10.0	24.9	10.0	17.3	15.5	60	31	1	
BRECKENRIDGE, COLO	47.8	16	12	12	3.09	1.20	1.20	12	13	10	10	12.8	24.9	12.8	18.8	15.5	60	31	1	
COPPER BUTTE, COLO	43.5	16	12	12	3.20	1.20	1.20	12	13	10	10	12.8	24.9	12.8	18.8	15.5	60	31	1	
CRESTED BUTTE, COLO	52.0	16	12	12	3.20	1.20	1.20	12	13	10	10	12.8	24.9	12.8	18.8	15.5	60	31	1	
LOVELAND PASS, U.S. 6	74.7	16	12	12	7.44	1.20	1.20	12	13	10	10	6.9	20.5	6.9	20.5	8.0	19	23	10	
MARY JANE, COLO	39.0	10	10	10	3.28	1.20	1.20	12	13	10	10	7.9	20.5	7.9	20.5	8.0	19	23	10	
MONARCH, COLO	55.1	15	11	11	3.37	1.20	1.20	12	13	10	10	10.4	22.6	10.4	16.5	22.6	13	26	20	
PURGATORY, COLO	94.6	15	11	11	6.35	1.20	1.20	12	13	10	10	11.0	22.6	11.0	16.5	22.6	13	26	20	
SUNLIGHT, COLO	61.4	15	11	11	4.15	1.20	1.20	12	13	10	10	11.0	22.6	11.0	16.5	22.6	13	26	20	
TAOS, NEW MEXICO	34.5	15	11	11	4.15	1.20	1.20	12	13	10	10	12.4	22.6	12.4	19.0	17.0	30	12	48	
TELLURIDE, COLO	35.2	15	11	11	3.41	1.20	1.20	12	13	10	10	12.4	22.6	12.4	19.0	17.0	30	12	48	
VALE, COLO	31.0	15	11	11	3.41	1.20	1.20	12	13	10	10	12.4	22.6	12.4	19.0	17.0	30	12	48	
WINTER PARK, COLO	64.5	15	11	11	3.41	1.20	1.20	12	13	10	10	12.4	22.6	12.4	19.0	17.0	30	12	48	
WOLF CREEK, COLO	112.2	15	11	11	13.52	1.20	1.20	12	13	10	10	12.2	22.6	12.2	19.5	10.1	30	12	48	
INTERMOUNTAIN																				
BIG SKY, MONT	43.0	10	15	15	2.86	1.20	1.20	12	13	10	10	6.8	20.6	6.8	17.5	23.4	11	27	5	
BRIDGER BOWL, MONT	68.5	10	15	15	3.57	1.20	1.20	12	13	10	10	9.4	20.6	9.4	17.5	23.4	11	27	5	
GRAND TARGHEE, WYO	64.6	10	15	15	2.95	1.20	1.20	12	13	10	10	5.4	20.6	5.4	17.5	23.4	11	27	5	
JACKSON HOLE, WYO	93.5	10	15	15	6.96	1.20	1.20	12	13	10	10	5.0	20.6	5.0	17.5	23.4	11	27	5	
SCHWEITZER BASIN, ID	65.4	10	15	15	6.96	1.20	1.20	12	13	10	10	5.0	20.6	5.0	17.5	23.4	11	27	5	
SNOWBIRD, UTAH	98.5	10	15	15	6.44	1.27	1.27	17	13	10	7	9.5	20.6	9.5	17.5	23.4	11	27	5	
SOLITUDE, UTAH	68.5	10	15	15	4.35	1.20	1.20	12	13	10	10	6.3	20.6	6.3	17.5	23.4	11	27	5	
SUN VALLEY, IDAHO	34.4	10	11	11	2.44	1.20	1.20	12	13	10	10	6.3	20.6	6.3	17.5	23.4	11	27	5	
TETON PASS, WYO 22	89.0	10	16	16	6.48	1.19	1.19	14	13	13	4	9.9	22.2	9.9	15.0	11.6	34	6	40	
WEST COAST																				
ALPINE MEADOWS, CAL	37.5	10	17	17	2.99	1.50	1.50	17	16	5	4	7.0	30.7	19.0	24.9	3.6	2	0	60	
ALPESKA, ALASKA	37.0	11	12	12	8.52	1.50	1.50	17	16	5	4	7.0	30.7	19.0	24.9	3.6	2	0	60	
CRYSTAL MTN 1, WASH	92.6	11	14	14	10.00	1.50	1.50	17	16	5	4	7.0	30.7	19.0	24.9	3.6	2	0	60	
CRYSTAL MTN 2, WASH	113.6	11	14	14	9.91	1.50	1.50	17	16	5	4	7.0	30.7	19.0	24.9	3.6	2	0	60	
EAGLE CREST, ALASKA	60.0	11	13	13	8.00	1.35	1.35	6	15	14	5	7.0	26.1	16.0	21.1	11.1	11	11	11	
HEAVENLY VALLEY, CALIF	12.0	11	11	11	1.35	1.50	1.50	17	16	5	4	7.0	30.7	19.0	24.9	3.6	2	0	60	
JUNE MOUNTAIN, CALIF	29.5	11	11	11	1.35	1.50	1.50	17	16	5	4	7.0	30.7	19.0	24.9	3.6	2	0	60	
MAHOGANY MOUNTAIN, CALIF	42.0	11	11	11	1.35	1.50	1.50	17	16	5	4	7.0	30.7	19.0	24.9	3.6	2	0	60	
MT. HOOD, ORE	123.8	11	14	14	16.20	2.30	2.30	22	20	16	12	6	15.6	27.2	15.6	22.2	19.3	75	63	
MT. RAINIER, PARADISE	151.8	11	13	13	6.87	1.21	1.21	10	14	11	6	15.6	27.2	15.6	22.2	19.3	75	63	60	
MT. ROSE/SLIDE MT, NV	21.4	10	11	11	6.87	1.21	1.21	10	14	11	6	15.6	27.2	15.6	22.2	19.3	75	63	60	
MULTIPLYER SKI BUL, OR	98.5	11	13	13	6.87	1.21	1.21	10	14	11	6	15.6	27.2	15.6	22.2	19.3	75	63	60	
SNUG VALLEY, CALIF	142.0	11	12	12	2.63	1.40	1.40	16	15	5	3	11.5	31.2	18.7	25.0	11.0	33	22	7	
STEVENS PASS, WASH	122.3	11	14	14	9.14	1.50	1.50	16	15	5	3	11.5	31.2	18.7	25.0	11.0	33	22	7	
STEVENS PASS, SE WASH	126.5	11	17	17	20.37	1.50	1.50	16	15	5	3	11.5	31.2	18.7	25.0	11.0	33	22	7	
SUGAR BOWL, CALIF	23.5	11	13	13	3.37	1.56	1.56	15	20	18	14	16.5	24.7	14.3	24.7	6.9	11	4	40	
-- DATA INCOMPLETE OR MISSING																				
M-ONE OR MORE DAYS OF RECORD MISSING-IF AVERAGE VALUE IS ENTERED, LESS THAN 10 DAYS RECORD IS MISSING																				
IF "N" IS ENTERED IN WIND SPEED COLUMN, LESS THAN 37.5-HOUR PERIODS ARE MISSING																				
GE--GREATER THAN OR EQUAL TO																				

-- DATA INCOMPLETE OR MISSING
-- ONE OR MORE DAYS OF RECORD MISSING-IF AVERAGE VALUE IS ENTERED, LESS THAN 10 DAYS RECORD IS MISSING
-- IF WIND IS ENTERED IN WIND SPEED COLUMN, LESS THAN 37 6-HOUR PERIODS ARE MISSING
-- GREATER THAN OR EQUAL TO

U.S. FOREST SERVICE
ALPINE SNOW AND AVALANCHE RESEARCH PROJECT
RM STATION FORT COLLINS, COLO.

1944
DECEMBER
AVALANCHE SUMMARY

AREA	TOTAL			TOTAL			DATES OF			NUMBER OF DAYS WITH			TYPE OF AVALANCHE			FRACTURE LINE HEIGHTS IN FEET			VERTICAL DESCENT IN FEET			AVALS ACROSS MAJOR ACCESS ROADS NO.
	A	V	L	A	V	L	F	I	R	S	T	L	A	S	L	A	V	L	GE	GE	GE	
	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.
CENTRAL AND SOUTHERN ROCKY MOUNTAINS																						
ARAPAHOE BASIN, COLO	25	31	18	12	10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
ASPEN HIGHLANDS, COLO	28	30	17	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0
ASPEN MOUNTAIN, COLO	33	71	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
BEAVER CREEK, COLO	33	78	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
BERTHOUD PASS, COLO	33	78	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
BERTHOUD PASS, U.S. 40	33	78	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
BRICKENRIDGE, COLO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
COPPER MINE, COLO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
CRESTED BUTTE, COLO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
GOTHIC, COLO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
LOVELAND PASS, COLO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
LOVELAND PASS, U.S. 6	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
MONARCH, COLORADO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
RED MOUNTAIN, U.S. 550	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
SAN JUAN MTS., COLO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
SILVERTOP, COLO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
SUNLIGHT, COLORADO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
TADS, NEW MEXICO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
TELLURIDE, COLO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
WOLF CREEK, COLO	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
WOLF CRK PASS US 160	28	33	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
INTERMOUNTAIN																						
ALTA, UTAH	14	74	28	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
BIG SKY, MONT	96	127	30	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
BRIDGER BOWL, MONT	53	100	30	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
JACKSON HOLE, WYO	68	158	30	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
SCHNEIDER, ID	27	72	29	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
SNOWBIRD, UTAH	18	18	23	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
SOLITUDE, UTAH	11	11	23	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
TETON PASS, WYO 22	12	12	17	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
JASATCH RANGE, UTAH	12	12	17	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
WEST COAST																						
ALPINE MEADOWS, CAL	126	202	17	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
ALYCE, CALIF	38	46	29	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
CRYSTAL MOUNTAIN, WASH	60	122	29	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
EAGLE CREST, ALASKA	14	14	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
HEAVENLY VALLEY, CALIF	13	13	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
JUNE MOUNTAIN, CALIF	1	1	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
KIRKWOOD MOUNTAINS, CALIF	32	105	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
MAMMOTH MOUNTAIN, CALIF	11	11	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
MISSION RIDGE, WASH	11	11	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
MOUNT MEADOWS, WASH	11	11	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
MT. RAINIER, WASH	15	15	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
MT. ROSE, CALIF	14	14	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
SQUAW VALLEY, CALIF	14	14	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
STEVENSON PASS, U.S. 2	53	122	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
SUGAR BOWL, CALIF	25	31	16	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0

---DATA INCOMPLETE OR MISSING
---GREATER THAN OR EQUAL TO
---ALSO OCCURRED ON OTHER DATES